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ABSTRACT

Studies of parents of children treated for cancer have rarely included adequate samples of fathers or couples. Further, bereaved parents have been over-represented as compared to parents of cancer survivors. This study investigated the personal and interpersonal effects of having a child treated for cancer on 124 parents. Twenty-seven married couples were bereaved and 33 married couples were nonbereaved. Four bereaved parents without spouses were also included. All survivors had been off-treatment for at least 6 months and the average time since diagnosis was 6 years. Effects at the personal level-psychological distress-were assessed by self-report on one global scale and 7 subscales of the Brief Symptom Inventory (BSI). Effects at the interpersonal level-marital satisfaction-were assessed by self-report on the summary scale and 2 factors of the Martial Adjustment Test. Mothers and fathers reported higher levels of psychological distress than nonpatient norms, but lower levels than outpatient psychiatric norms. Fathers reported lower levels of marital satisfaction than nonreferred male norms; mothers did not differ from norms on marital satisfaction. Matched pairs t-tests on 60 couples demonstrated no differences between mothers and fathers in terms of levels of psychological distress and marital satisfaction. Bereaved and nonbereaved mothers did not differ on reported levels of psychological distress after controlling for the effects of time since diagnosis. This time effect appeared to be more salient for mothers, with mothers of more recently diagnosed children reporting higher levels of distress. Bereaved fathers did report higher levels of psychological distress on several BSI subscales than did nonbereaved fathers; no effect of time since diagnosis was observed for fathers. After a median split into high and low on the distress dimension, bereaved mothers reporting higher psychological distress also reported lower satisfaction with their marriages. Fathers reporting higher levels of psychological distress also reported lower marital satisfaction, but this was true of both bereaved and nonbereaved fathers. The results reveal some areas of similarity in outcome for bereaved and nonbereaved parents and for mothers and fathers of children treated for cancer. There are suggestions, however, of differential processes for mothers

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Individual and Marital Adjustment Among Bereaved and Nonbereaved Parents of Children Treated for Cancer

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ABSTRACT

Studies of parents of children treated for cancer have rarely included adequate samples of fathers or couples. Further, bereaved parents have been over-represented as compared to parents of cancer survivors. This study investigated the personal and interpersonal effects of having a child treated for cancer on 124 parents. Twenty-seven married couples were bereaved and 33 married couples were nonbereaved. Four bereaved parents without spouses were also included. All survivors had been off-treatment for at least 6 months and the average time since diagnosis was 6 years. Effects at the personal level-psychological distress-were assessed by self-report on one global scale and 7 subscales of the *Brief Symptom Inventory*. Effects at the interpersonal level-marital satisfaction-were assessed by self-report on the summary scale and 2 factors of the *Marital Adjustment Test*. Mothers and fathers reported higher levels of psychological distress than nonpatient norms, but lower levels than outpatient psychiatric norms. Fathers reported lower levels of marital satisfaction than nonreferred male norms; mothers did not differ from norms on marital satisfaction. Matched pairs t-tests on 60 couples demonstrated no differences between mothers and fathers in terms of levels of psychological distress and marital satisfaction. Bereaved and nonbereaved mothers did not differ on reported levels of psychological distress after controlling for the effects of time since diagnosis. This time effect appeared to be more salient for mothers, with mothers of more recently diagnosed children reporting higher levels of distress. Bereaved fathers did report higher levels of psychological distress on several *BSI* subscales than did nonbereaved fathers; no effect of time since diagnosis was observed for fathers. After a median split into high and low on the distress dimension, bereaved mothers reporting higher psychological distress also reported lower satisfaction with their marriages. Fathers reporting higher levels of psychological distress also reported lower marital satisfaction, but this was true of both bereaved and nonbereaved fathers. The results reveal some areas of similarity in outcome for bereaved and nonbereaved parents and for mothers and fathers of children treated for cancer. There are suggestions, however, of differential processes for mothers and fathers in terms of the effects of time since diagnosis, treatment outcome, and personal distress on satisfaction with the marital relationship. The results are suggestive of the complexities of parental coping with childhood cancer and the need for greater specificity and continued study.

BACKGROUND

Studies of parents of children treated for cancer were conducted primarily on samples of bereaved parents for many years. With improved antineoplastic treatment and survival, and a resultant shift to viewing childhood cancer within a chronic illness model, questions as to the long-term effects of childhood cancer on parents have surfaced. Studies with parents of survivors are few however, and rarely have they employed standardized measurement instruments.

Studies of parents of children with a variety of chronic or life-threatening illnesses (including cancer) have focused primarily on mothers, with surprisingly little attention being given to fathers, the marital relationship of the parents, or overall family functioning. This lack of empirical evidence has not prevented some from concluding that mothers of chronically ill children experience greater distress than do fathers. Comparison studies are clearly needed.

When control groups have been used, investigators have tended to look to "normal" parents (i.e.; parents whose children do not have a chronic illness). Initially, this may have been useful in a descriptive sense, but it has also served to support a more pathological perception of these parents than may be warranted. What is needed currently is more systematic research aimed at exploring the complexities that are involved in parental coping with a chronic, life-threatening childhood illness.

Typically, parents whose children have died from cancer and parents of cancer survivors have not been compared. This may be due, in part, to assumptions and expectations for bereaved parents to experience greater distress. While intuitively appealing, this assumption has not been adequately tested.

PURPOSE OF THE STUDY

The purpose of the study was to investigate the degree of psychological distress and marital satisfaction among parents of children treated for cancer. Further, we sought to compare the psychological distress and marital satisfaction of mothers of children treated for cancer with that of fathers of children treated for cancer. Lastly, we proposed comparing the degree of psychological distress and marital satisfaction of bereaved parents with that of parents of long-term survivors of cancer.

RESEARCH QUESTIONS

1. Do parents of children treated for cancer report (a) elevated levels of psychological distress or (b) lower levels of marital satisfaction as compared with a normative sample?

2. Do mothers and fathers differ on the degree of reported (a) psychological distress or (b) marital satisfaction following the treatment of a child for cancer?

3. Do bereaved parents report (a) higher levels of psychological distress or (b) lower levels of marital satisfaction as compared to parents of cancer survivors ?

PARTICIPANTS

Subjects were 124 parents of children treated for cancer. Twenty-seven married couples were bereaved parents (N=54) and 33 married couples were parents of a cancer survivor (N=66). Two bereaved mothers were single parents (divorced prior to the child's diagnosis with cancer) and one bereaved father and one bereaved mother from two different married couples did not complete the questionnaires.

Eligibility Criteria. Each parent must have been present in the home at the time of the cancer diagnosis and throughout the treatment period. The child's cancer diagnosis was less than 10 years ago and the time from diagnosis to the end of treatment (or death) was at least 6 months. The child with cancer was no longer receiving active treatment. The was at least one healthy sibling in each family.

The result reported represent preliminary analyses from a larger study designed to explore the effects of family functioning characteristics on the adjustment outcome of siblings and parents following the treatment of a child for cancer.

INSTRUMENTS

BSI - Brief Symptom Inventory - self-report (Derogatis & Spencer, 1982) is a 63-item multidimensional standardized inventory which assesses current point-in-time psychological symptom status. It is the short form of the *SCL-90*. Higher scores indicate higher levels of symptomatology. The *BSI* includes 9 subscales and 3 summary scales. Seven subscales were of interest with the present sample (based on the literature):

-somatization (*SOM*)
-obsessive-compulsive *(OC)*
-interpersonal sensitivity *(IS)*
-depression (*DEP*).
-anxiety (*ANX*)
-hostility (*HOS*)
-paranoid ideation (*PI*)

One summary scale was also used:

-Global Severity Index (*GSI*).

MAT - Marital Adjustment Test - self-report (Kimmel & van der Veen, 1974) is a 23-item standardized measure designed to assess levels of marital satisfaction and accommodation of spouses to one another. Higher scores indicate higher levels of marital satisfaction. The *MAT* includes 2 factors and 1 summary score. Two factors were examined:

-compatibility (*COM*)
-sexual congeniality (*SEX*).

These 2 factors are scored differently for females and males; therefore scores across gender on *COM* and *SEX* are *not* comparable.

One summary score was also used:

-Total Marital Satisfaction (*TMS*).

The summary scale is scored the same for females and males.

PROCEDURES

Subject Identification

The mailing list of a local parent fund-raising group was utilized to contact potential subject families. Active group participation was ***not*** a prerequisite for inclusion on the mailing list, thereby decreasing concerns of self-selection.

Data Collection

Assessment interviews were conducted by the investigator and 2 trained research assistants in the homes of the parents. Informed consent was obtained from each participant. A semi-structured interview was used to collect demographic and treatment data. Parents then completed the self-report measures. Debriefing and emotional reactions were assessed and referrals to counseling services were provided.

ANALYSES

1. t-tests comparing parents of children treated for cancer with standardized norms for BSI and MAT:

Independent variable - *group* (parents vs. normative samples for *BSI* and *MAT*)
Dependent variables - (a) *GSI* score, (b) *TMS* score.

2. t-test comparing parents by gender:

Matched pairs t-tests were used to compare the (a) degree of overall psychological distress among mothers and fathers on *BSI* summary scale *(GSI)* and (b) the degree of overall marital satisfaction among mothers and fathers on the *MAT* summary score *(TMS)*.

Married mothers and fathers were paired and assessed for differences given the non-independence of a married couples sample.

Independent variable - *gender.*
Dependent variable - (a) *GSI* score, (b) *TMS* score.

3. MANOVAs comparing parents by status:

One-way MANOVAs were used to compare the degree of psychological distress between bereaved and nonbereaved mothers and fathers.

MANOVAs were run separately on mothers and fathers given the non-independence of the sample.

A covariate *(time since diagnosis)* was entered first given that the bereaved and

nonbereaved samples differed significantly on this variable.

Factor- *status* (bereaved vs. nonbereaved).
Multivariate dependent variables - 7 subscales of the *BSI* (*SOM, OC, IS, DEP, ANX, HOS, PI*).

4. MANOVAs comparing parents by status and level of psychological distress:

Two-way MANOVAs (2 x 2) were used to compare the degree of marital satisfaction among bereaved and nonbereaved mothers and fathers who reported high vs. low levels of psychological distress.

MANOVAs were run separately for mothers and fathers given the non-independence of the sample and the lack of gender comparability on the 2 *MAT* factors.

Median splits were done on the *GSI* summary scale of the *BSI*. Parents were then coded as *high* or *low* on the factor *distress*.

A covariate *(time since diagnosis)* was entered first given that the bereaved and nonbereaved samples differed significantly on this variable.

Factors - *status* (bereaved and nonbereaved) and *distress* (high and low).
Multivariate dependent variables - 2 factors and summary score of the *MAT* (*COM, SEX, TMS*).

The .05 probability level was adopted for reporting significance for all analyses.

RESULTS

t-tests

Parents of children treated for cancer reported levels of psychological distress on the *BSI-GSI* summary scale and 6 of 7 *BSI* subscales (*OC, IS, DEP, ANX, HOS, PI*) which were significantly **higher** than those reported by a nonpatient normative sample. (Table 1).

Parents of children treated for cancer reported levels of psychological distress on the *BSI-GSI* summary scale and all 7 *BSI* subscales which were significantly **lower** than those reported by an outpatient psychiatric normative sample.

Mothers of children treated for cancer reported levels of marital satisfaction on the *MAT-TMS* summary scale that **did not differ** significantly from those reported by a nonreferred female normative sample. (Table 1).

Fathers of children treated for cancer reported levels of marital satisfaction on the *MAT-TMS* scale that were significantly **lower** than those reported by a nonreferred male

normative sample. (Table 1).

Matched pairs t-tests revealed that mothers and fathers of children treated for cancer **did not differ** significantly from one another on reported levels of psychological distress as measured by the *BSI-GSI* summary scale nor on reported levels of marital satisfaction as measured by the *MAT-TMS* summary scale. (Table 2).

MANOVAs

Mothers of children more recently diagnosed with cancer reported significantly **higher** levels of psychological distress on 5 of 7 *BSI* subscales (*IS, DEP, ANX, HOS, PI*) than did mothers of children diagnosed less recently. (Table 3).

Mothers of deceased children **did not differ** significantly from mothers of children who had survived cancer on reported levels of psychological distress as measured by 7 subscales of the *BSI (SOM, OC, IS, DEP, ANX, HOS, PI)* after controlling for the effect of *time since diagnosis.* (Table 3).

Fathers of deceased children reported significantly **higher** levels of psychological distress on 3 of 7 *BSI* subscales *(OC, DEP, PI)* than did fathers of children who had survived cancer. There was no significant effect of *time since diagnosis* for fathers. (Table 4).

For mothers of children treated for cancer, no main effect was found for *status* (bereaved vs. nonbereaved) nor for level of reported psychological *distress* on reported levels of marital satisfaction. (Table 5).

An interaction effect was found, with bereaved mothers reporting higher levels of distress on the *BSI-GSI* reported significantly **lower** levels of marital satisfaction on the *MAT* subscale *Sexual Congeniality* and the summary scale, *MAT-TMS* than did bereaved mothers reporting lower distress and nonbereaved mothers reporting both higher and lower levels of distress. (Table 5).

For fathers of children treated for cancer, only a main effect for level of psychological *distress* was found. Fathers reporting higher levels of distress on the *BSI-GSI* reported significantly **lower** levels of marital satisfaction on both *MAT* subscales *(COM, SEX)* and on the summary scale *(TMS)* than did fathers reporting lower levels of psychological distress. This was true both for bereaved and nonbereaved fathers. (Table 6).

CONCLUSIONS

Consistent with other studies, parents of children treated for cancer reported significantly higher levels of psychological distress in the areas of depression, anxiety, hostility, interpersonal sensitivity, obsessive-compulsive disorder, and paranoid ideation than did a nonpatient normative sample.

Their scores, however, were significantly lower than an outpatient psychiatric normative

sample. Further, the mean scores for the parent sample did not exceed the clinical cut-off (T score > 63) of the *BSI*. At (on average) 6 years after diagnosis, these parents do appear to be experiencing greater distress, but the clinical significance of this elevation is unclear.

Fathers of children treated for cancer also reported lower levels of marital satisfaction than did a nonreferred normative group; a lower level of marital satisfaction was not found among mothers.

Mothers and fathers of children treated for cancer reported similar levels of psychological distress and marital satisfaction, in contrast to previous studies which have suggested that mothers of ill children are affected more negatively than are fathers.

The lack of a main effect for *status* for mothers suggests that bereaved and nonbereaved mothers of children treated for cancer do not differ in terms of the degree of subsequent psychological distress. For mothers, the length of time since diagnosis appears to be a more salient factor.

For fathers, bereavement was associated with more psychological distress in the areas of obsessive-compulsive disorder, depression, and paranoid ideation. No time effect was found for fathers.

It may be that mothers of children who have survived cancer remain distressed in part due to fear of relapse, concerns over long-term toxic effects of the treatment, residual disabilities, etc. Fathers may be experiencing less distress in this realm or have a more optimistic appraisal of their child's future. These potential correlates remain to be investigated.

Bereaved mothers who are experiencing higher levels of psychological distress appear to be at higher risk for less satisfaction with their marriages. Perhaps, the loss of the relationship with the child acts to heighten the inadequacies or disappointments she perceives in her other significant relationships.

Interestingly, more highly distressed nonbereaved mothers did not report lower marital satisfaction. While the explanation is unclear, it may be that for these mothers, a continued focus on the survivor and maintenance of her role as caregiver to a chronically ill child act to ameliorate or buffer potential dissatisfaction with the marital relationship.

More highly distressed fathers reported lower marital satisfaction, whether bereaved or nonbereaved. It is unclear if this is specific to fathers of children treated for cancer or is a process more broadly evident in the general population.

These results suggest that:
(1) further exploration of the effect of childhood cancer on parents include adequate paternal and/or parental couple samples;
(2) assumptions about the long-term effects of childhood cancer on parents may be too simplistic, especially in regards to expectations commonly held that bereaved parents will be more distressed than parents of cancer survivors. It is more likely that the *quality* of

the distress of bereaved and nonbereaved parents is what differs. These potential qualitative differences demand further investigation;
(3) while mothers and fathers of children treated for cancer appear to experience similar levels of overall psychological distress and marital satisfaction, several factors may be contributing to differential processes in regard to the more specific effects of time since diagnosis, outcome of treatment, and perception of the marital relationship on subsequent parental functioning;
(4) further study of factors such as gender role expectations, presence and accessibility of adequate social support, opportunities for employment, family functioning characteristics, and continuing concerns of parents of long-term survivors is warranted in order to begin to unravel the complexities in parental coping with childhood cancer that have been suggested by these results.

REFERENCES

Barbarin, O. A. (1987). Psychosocial risks and invulnerability: A review of the theoretical and empirical bases of preventive family-focused services for survivors of childhood cancer. Journal of Psychosocial Oncology, 5, 25-41.

Baskin, C. H., Forehand, R., & Saylor, C. (1986). Predictors of psychological adjustment in mothers of children with cancer. Journal of Psychosocial Oncology, 3, 43-54.

Binger, C. M., Albin A. R., Feuerstein, R. C., Kishner, J. H., Zoger, S., & Mikkelsen, C. (1969). Childhood leukemia: Emotional impact on patient and family. New England Journal of Medicine, 280, 414-419.

Chesler, M. A., & Barbarin, O. A. (1987). Childhood cancer and the family: Meeting the challenge of stress and support. New York: Brunner/Mazel.

Cook, J. A. (1984). Influences of gender on problems of parents of fatally ill children. Journal of Psychosocial Oncology, 2, 71-91.

Derogatis, L. R., & Spencer, P. H. (1982). The Brief Symptom Inventory (BSI): Administration, scoring, and procedures manual-I. Baltimore:Clinical Psychometric Research.

Eiser, C. (1990). Chronic childhood disease: An introduction to psychological theory and research. Cambridge: Cambridge University Press.

Fisman, S. & Wolf, L. (1991). The handicapped child: Psychological effects of parental, marital, and sibling relationships. Psychiatric Clinics of North America, 14, 199-217.

Johnson, S. B. (1985). The familiy and the child with chronic illness. In D. C. Turk & R. D. Kerns (Eds.), Health, illness, and families: A life-span perspective (pp. 220-254). New York: Wiley.

Kagan-Goodheart, L. (1977). Re-entry: Living with childhood cancer. American Journal of Orthopsychiatry, 47, 651-658.

Kaplan, D. M., Smith, A., Grobstein, R., & Fischman, S. E. (1973). Family mediation of stress. Social Work, 18, 60-69.

Kaplan, D. M., Grobstein, R., & Smith, A. (1976). Predicting the impact of severe illness in families. Health and Social Work, 1, 72-82.

Kazak, A. E. (1989). Families of chronically ill children: A systems and social ecological model of adaptation and challenge. Journal of Consulting and Clinical Psychology, 57, 25-30.

Kazak, A. E., & Meadows, A. T. (1989). Families of young adolescents who have survived cancer: Social-emotional adjustment, adaptation, and social support. Journal of Pediatric PSychology, 14, 175-191.

Kimmel, D., & Van Der Veen, F. (1974). Factors of marital adjustment in Locke's Marital Adjustment Test. Journal of Marriage and the Family, 36, 57-63.

Koocher, G. P., & O'Malley, J. E. (Eds.) (1980). The Damocles Syndrome: Psychosocial consequences of childhood cancer. New York: McGraw-Hill.

Kosten, T. R., Jacobs, S. C., & Kasl, S. V. (1985). Terminal illness, bereavement, and the family. In D. C. Turk & R. D. Kerns (Eds.), Health, illness, and families: A life-span perspective (pp. 311-337). New York: Wiley.

Kronenberger, W. G., & Thompson, R. J., Jr. (1992). Psychological adaptation of mothers of children with spina bifica: Association with dimensions of social relationships. Journal of Pediatric Psychology, 17, 1-14.

Lansky, S. B., Cairns, N. U., Hassanein, R., Wehr, J., & Lowman, J. T. (1978). Childhood cancer: Parental discord and divorce. Pediatrics, 62, 184-188.

Lauer, M. E., Mulhern, R. K., Schell, M. J., & Camitta, B. M. (1989). Long-term follow-up of parental adjustment following a child's death at home or hospital. Cancer, 63, 988-994.

Miles, M. S. (1985). Emotional symptoms and physical health in bereaved parents. Nursing Research, 34, 76-81.

Moore, I. M., Gilliss, C. L., & Martinson, I. (1988). Psychosomatic symptoms in parents 2 years after the death of a child with cancer. Nursing Research, 37, 104-107.

Mulhern, R. K., Crisco, J. J., & Camitta, B. M. (1983). Patterns of communication among pediatric patients with leukemia, parents and physicians: Prognostic disagreements and misunderstandings. Journal of Pediatrics, 99, 480-483.

Peck, B. (1979). Effects of childhood cancer on long-term survivors and their families. British Medical Journal, 1, 1327-1329.

Petermann, F., & Bode, U. (1986). Five coping styles in families of children with cancer: A retrospective study in thirty families .Pediatric Hematology and Oncology, 3, 299-309.

Rando, T. A. (1983). An investigation of grief and adaptation in parents whose children

have died from cancer. Journal of Pediatric Psychology, 8, 3-20.

Speechley, K. N., & Noh, S. (1992). Surviving childhood cancer, social support, and parents' psychological adjustment. Journal of Pediatric Psychology, 17, 15-31.

Spinetta, J. J., Swarner, J. A., & Sheposh, J. P. (1981). Effective parental coping following the death of a child from cancer. Journal of Pediatric Psychology, 6, 251-263.

Tietz, W., McSherry, L., & Britt, B. (1977). Family sequelae after a child dies due to cancer. American Journal of Psychotherapy, 31, 417-425.

Walker, L. S., Ortiz-Valdes, J. A., & Newbrough, J. R. (1989). The role of maternal employment and depression in the psychological adjustment of chronically ill, mentally retarded, and well children. Journal of Pediatric Psychology, 14, 357-370.

Wallace, M. H., Reiter, P. B., & Pendergrass, T. W. (1987). Parents of long-term survivors of childhood cancer: A preliminary survey to characterize concerns and needs. Oncology Nursing Forem, 14, 39-43.

Wallander, J. L., Varni, J. W., Babini, L., Banis, H. T., DeHaan, C. B., & Wilcox, K. T. (1989). Disability parameters, chronic strain, and adaptation of physically handicapped children and their mothers. Journal of Pediatric Psychology, 14, 23-42.

Wallander, J. L., Varni, J. W., Babini, L., Banis, H. T., Wilcox, K. T.(1989). Family resources as resistance factors for psychological maladjustment in chronically ill and handicapped children. Journal of Pediatric Psychology, 14, 157-173.

Table 1 - t-test: *BSI* and *MAT* Mean Raw Scores of Parents of Children Treated for Cancer Compared with Normative Samples.

BSI-Dependent Measure	Parent Sample N=124	Nonpatient Norms N=719	t
BSI - Somatization			
Mean	0.32	0.29	0.5915 NS
SD	0.54	0.40	
BSI - Obsessive-Compulsive			
Mean	0.83	0.43	6.0368 ***
SD	0.71	0.48	
BSI - Interpersonal Sensitivity			
Mean	0.54	0.32	3.7081 ***
SD	0.63	0.48	
BSI - Depression			
Mean	0.51	0.28	3.7289 ***
SD	0.66	0.46	
BSI - Anxiety			
Mean	0.51	0.35	3.1683 **
SD	0.53	0.45	
BSI - Hostility			
Mean	0.56	0.35	3.4711 ***
SD	0.65	0.42	
BSI - Paranoid Ideation			
Mean	0.53	0.34	3.5829 ***
SD	0.56	0.45	
BSI - Global Severity Index			
Mean	0.50	0.30	4.4893 ***
SD	0.48	0.31	
MAT-Dependent Measure	Parent Sample	Nonreferred Norms	t
MAT - Total Marital Satisfaction-Mothers			
Mean	106.43	108.40	-0.796 NS
SD	16.27	16.32	
N	61	149	
MAT - Total Marital Satisfaction-Fathers			
Mean	104.51	110.22	-2.7081 **
SD	15.97	16.28	
N	61	157	

** p<.01 *** p<.001

Table 2 - Paired t-tests: Comparing *BSI-GSI* and *MAT-TMS* Mean Scores of Mothers and Fathers.

Dependent Variables	Mothers	Fathers	*t*
BSI-Global Severity Index			
Mean	55.117	56.500	t =-0.87
SD	9.803	11.434	df= 59
N	60	60	p =.387 NS
MAT-Total Marital Satisfaction			
Mean	106.650	104.883	t = 0.91
SD	16.310	15.836	df= 59
N	60	60	p = .366 NS

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Table 3 - One-way MANOVA: Brief Symptom Inventory Subscales by Status - Mothers

MANOVA

Covariate - *time since diagnosis*

Wilks λ	Approximate *F*	df	Significance
0.6936	3.4074	7,54	*p*=.004

Univariate Regression Analyses

Dependent Variables - *BSI subscales*

Subscale	Adjusted R^2	Beta	df	*F*	Signif.
Somatization	.03385	-.2229	1,60	3.1371	*p*=.082 NS
Obsessive-compulsive	.01087	-.1646	1,60	1.6701	*p*=.201 NS
Interpersonal Sensitivity	.14901	-.4037	1,60	11.6809	*p*=.001
Depression	.05702	-.2692	1,60	4.6884	*p*=.034
Anxiety	.07621	-.3023	1,60	6.0323	*p*=.017
Hostility	.20817	-.4703	1,60	17.0371	*p*=.000
Paranoid Ideation	.07995	-.3083	1,60	6.3009	*p*=.015

MANOVA

Factor - *status*

Wilks λ	Approximate *F*	df	Significance
0.8057	1.8607	7,54	*p*=.094 NS

Table 4 - One-way MANOVA: Brief Symptom Inventory Subscales by Status - Fathers

MANOVA

Covariate - *time since diagnosis*

Wilks λ	Approximate *F*	df	Significance
0.86782	1.1315	7,52	*p*=.358 NS

MANOVA

Factor - *status*

Wilks λ	Approximate *F*	df	Significance
0.73236	2.7148	7,52	*p*=.018

Univariate ANOVA

Dependent Variables - *BSI subscales*

Subscale	Source	SS	MS	df	*F*	Signif.
Somatization	between	41.6145	41.6145	1	0.4086	*p*=.525 NS
	within	5907.7766	101.8582	58		
Obssessive-compulsive	between	697.5888	697.5888	1	5.8063	*p*=.019
	within	6968.3515	120.1440	58		
Interpersonal Sensitivity	between	302.4343	302.4343	1	3.241	*p*=.087 NS
	within	5800.5368	100.0093	58		
Depression	between	1350.0258	1350.0258	1	12.6842	*p*=.001
	within	6173.1774	106.4341	58		
Anxiety	between	40.4414	40.4414	1	0.3162	*p*=.576 NS
	within	7417.8697	127.8943	58		
Hostility	between	195.7696	195.7696	1	2.3231	*p*=.133 NS
	within	4887.7180	84.2710	58		
Paranoid Ideation	between	807.6223	807.6223	1	7.9090	*p*=.007
	within	5922.6182	102.1141	58		

Table 5 - Two-way MANOVA: Total Marital Satisfaction by Status and Distress-Mothers

MANOVA

Covariate - *time since diagnosis*

Wilks λ	Approximate *F*	df	Significance
0.98282	0.3147	3,54	*p*=.815 NS

MANOVA

Factor - *status*

Wilks λ	Approximate *F*	df	Significance
0.93433	1.26512	3,54	*p*=.296 NS

MANOVA

Factor - *distress*

Wilks λ	Approximate *F*	df	Significance
0.90830	1.81733	3,54	*p*=.155 NS

MANOVA

Factor - *status X distress*

Wilks λ	Approximate *F*	df	Significance
0.83083	3.66542	3,54	*p*=.018

Univariate ANOVA

Dependent Variables - *MAT subscales*

Subscale	Source	SS	MS	df	*F*	Signif.
Compatibility	between within	410.6054 6784.1575	410.6054 121.1457	1 56	3.3894	*p*=.071 NS
Sexual Congeniality	between within	34.4713 269.7182	34.4713 4.8164	1 56	7.1571	*p*=.010
Total Marital Satisfaction	between within	1330.0665 13359.390	1330.0665 238.5605	1 56	5.5754	*p*=.022

Table 6 - Two-way MANOVA: Total Marital Satisfaction by Status and Distress- Fathers

MANOVA

Covariate - *time since diagnosis*

Wilks λ	Approximate *F*	df	Significance
0.97118	0.5343	3,54	*p*=.661 NS

MANOVA

Factor - *status*

Wilks λ	Approximate *F*	df	Significance
0.98577	0.2590	3,54	*p*=.854 NS

MANOVA

Factor - *distress*

Wilks λ	Approximate *F*	df	Significance
0.76833	5.4276	3,54	*p*=.002

Univariate ANOVA

Dependent Variables - *MAT subscales*

Subscale	Source	SS	MS	df	*F*	Signif.
Compatibility	between within	539.3076 3202.0520	539.3076 57.1795	1 56	9.4318	*p*=.003
Sexual Congeniality	between within	708.1333 3809.6116	708.1333 68.0288	1 56	10.4093	*p*=.002
Total Marital Satisfaction	between within	2404.1470 12788.886	2404.1470 228.3730	1 56	10.5273	*p*=.002

MANOVA

Factor - *status X distress*

Wilks λ	Approximate *F*	df	Significance
0.91867	1.5936	3,54	*p*=.202 NS